

**MINUTES**  
**SCIENCE STANDARDS RECOMMENDATION COMMITTEE MEETING**  
**JULY 7, 2016**

The Standards Recommendation Committee met for its fifth scheduled meeting at the Tennessee School Boards Association office at 10 am CDT.

**Present.....9**

**Ms. Jan Allen Brewer**

**Ms. Marsha Buck**

**Ms. Jeannie Cuervo (Vice Chair)**

**Dr. Kent Gallaher**

**Ms. Lorrie Graves – jointed remotely**

**Ms. Annette Hurd**

**Dr. Sally Pardue (Chair)**

**Ms. LaToya Pugh – joined remotely**

**Mr. Mark Weeks**

**Absent.....1**

**Ms. Kattie Nash**

**10:00 AM**

**Dr. Sally Pardue** called the meeting to order.

**Dr. Pardue** asked for a motion to approve the agenda.

**ACTION:** **Dr. Kent Gallaher** moved acceptance. **Ms. Annette Hurd** seconded. The motion passed unanimously.

**Ms. Laura Encalade** began with a recap of the June meeting. She also gave an overview of what the desired outcomes were for the meeting.

**Dr. Pardue** asked for any questions. With none, the committee looked over the minutes from the last meeting.

**Dr. Pardue** asked for a motion to approve the agenda.

**ACTION:** **Mr. Mark Weeks** moved acceptance. **Ms. Jeannie Cuervo** seconded. The motion passed unanimously.

**10:07 AM**

**Dr. Andy Hebert** and **Ms. Andrea Allen** presented on the revisions that were made based on the committee's recommendations from the June meeting. Dr. Hebert explained the visual representation that was created for the Disciplinary Core Ideas and key content across grades K-8 and high school courses. He showed the committee how it illustrated the vertical progression of the standards. The visual could be included in the introduction.

**Ms. Marsha Buck** and **Ms. Cuervo** said that the visual should just be for K-8 and not for high school courses. **Ms. Buck** exclaimed that she liked the illustration and would be very helpful for teachers.

**Dr. Pardue** discussed with **Ms. Allen** and **Dr. Hebert** about the inclusion of ETS as a Disciplinary Core Idea.

**Dr. Pardue** said that **Dr. Hebert** and **Ms. Allen** captured the recommendation from the committee regarding the illustration. They addressed it and created a visual based on the committee's feedback.

#### **10:25 AM**

**Dr. Pardue** asked if a sentence can be added above the table to say which ETS Disciplinary Core Idea is represented in that grade level instead of modifying the table. **Dr. Hebert** said there is a sentence already included. **Dr. Pardue** said that it will either be an adjustment to the table or for a sentence to call that out in the document.

**Ms. Cuervo** said that this illustration will be used by teachers to look at the standards big picture.

**Dr. Hebert** moved to recommendation two from the committee to strengthen the grade level course introductions. He explained that the revisions made are to make the overviews consistent across grade levels, added tables that highlight what content will be taught, and the overviews describe what students should know by the end of the grade or course. **Ms. Lorrie Graves** asked if ETS would be reflected in the introductions.

**Dr. Pardue** said that it addressed the concerns she had as she looks through the introductions for each grade level. She said that she did want to add the word "thematic" to a specific sentence in sixth grade.

**Ms. Buck** asked for a more thorough explanation concerning the different themes in the middle grades – such as earth and science.

**Dr. Hebert** moved to discussion of the third recommendation from the committee. He said that what he is hoping to accomplish with this recommendation is for it to be addressed in the supporting document, which would be created by the Department of Education. **Ms. Allen** said that one piece of feedback they have heard from teachers is it just is too text-heavy and lengthy.

**Ms. Cuervo** said that teachers can use references, such as the supporting document, to deepen their knowledge. She also said that the recommendation said, "consider" and she believed that it has been considered.

#### **10:45 AM**

**Dr. Hebert** moved to recommendation four and five by the committee. The committee asked the educator advisory teams to reexamine the topic of scientific literacy in the introductions. The committee also asked the advisory teams to consider adding in a section on the specific role of literacy in the science classroom.

The committee liked the recommended literacy skills for science proficiency paragraphs. The advisory teams also made a graphic for the difference between scientific literacy and literacy.

**Dr. Pardue** and **Ms. Allen** rewrote one of the sentences on that page with input from the whole committee.

#### **11:05 AM**

**Dr. Hebert** moved to discussion of recommendation six. The committee asked the advisory teams to reexamine the language of the standards to ensure that verbiage is consistent with that of the K-12 framework and across all grade levels. He explained that the advisory teams reviewed all of the verbiage in the document to be consistent with the NRC Framework.

**Ms. Jan Brewer** said that she continues to be concerned about the assessment for the teachers so the students aren't assessed on a model that is not addressed in the standards.

**11:15 AM**

**Dr. Pardue** asked for a 5-minute break.

**11:20 AM**

**Ms. Allen** presented on the changes in recommendations 7 and 8 which dealt with specific standard changes. **Ms. Allen** started with the elementary standards.

**Mr. Weeks** said that the term 'data' should be included as another defined term in a supporting document.

**Dr. Pardue** asked to pause because there were a lot more third grade standards that asked for revisions and let the committee catch up.

**Dr. Gallaher** said that in many of the standards, the committee was concerned with consistent language.

The committee discussed the idea to remove 'chemical change' from one of the standards so the teachers could only focus on physical change. Or to re-word the standard to reflect chemical change while also teaching physical properties.

**11:55 AM**

The committee broke for lunch.

**12:25 PM**

**Ms. Leigh Cummins** called roll. **Dr. Hebert** started with the sixth grade recommended changes. The four sixth grade standards that were specified by the committee to revise were mainly verbiage changes.

**12:35 PM**

**Ms. LaToya Pugh** joined remotely for the rest of the afternoon.

**Dr. Hebert** moved to discussion of seventh grade standard changes. The committee talked about four specific standards in depth and their revisions.

**12:50 PM**

**Dr. Hebert** transitioned to discussion about specific eighth grade standard changes. The committee discussed four specific standards. All committee members said that the eighth grade changes made the grade level standards much stronger. The committee debated the language in standard 8.ESS1.1.

**1:12 PM**

**Ms. Allen** presented on the physical science and chemistry 1 and 2 changes. There was only one recommended revision for physical science and eleven chemistry recommended revisions.

**Ms. Cuervo** said that she was hopeful that teachers who taught these courses looked at them together instead of separately.

**Ms. Hurd** thanked them for the tremendous work **Ms. Allen** and **Dr. Hebert** have done to create these standards and revise them with feedback from the committee.

**1:25 PM**

**Dr. Hebert** began his presentation on the revisions to five specific Biology 1 standards. The committee discussed specific changes in the five standards, including deleting one standard. The committee also talked about where to add in ETS in the revised standards.

**1:40 PM**

**Ms. Encalade** shared with the committee a draft of specific changes and edited the document with the committee's feedback.

**1:50 PM**

**Dr. Pardue** asked for a motion that the committee accepts the changes in response to the recommendations and the resulting document is acceptable.

**ACTION:** **Dr. Gallaher** moved acceptance. **Ms. Buck** seconded. The motion passed unanimously.

**1:55 PM**

**Ms. Encalade** shared the Middle School Progression document that includes paragraphs on themes addressed in the middle school science standards. The committee wrote more sentences in some of the theme explanations.

**2:20 PM**

The committee continued to go through and edit the revisions that have occurred through the committee's discussion.

**Dr. Pardue** asked for a motion to accept all of the recommendations and submit to the State Board of Education the amended recommendations document.

**ACTION:** **Ms. Buck** moved acceptance. **Ms. Brewer** seconded. The motion passed unanimously.

**2:40 PM**

The committee moved to reading the draft of the position statement. The committee revised the language paragraph by paragraph.

**Ms. Brewer** suggested that it should be clear in the position statement who would be developing the training for the district.

**Ms. Graves** specified that there should be an acknowledgment in the opening paragraph of the exhaustive list of organizations that committee members reached out to in order to review the standards.

The committee also decided to make reference to the creation of supplemental documents, including definitions, vocabulary, practice tests and cross-cutting models, which they would want to see in the supplemental documents.

**Ms. Graves** asked who would be creating the supplementary documentation. **Ms. Encalade** informed her that it would be the Tennessee Department of Education.

**3:30 PM**

**Mr. Weeks** asked to add a sentence about transparency to the assessment piece in the position statement. The committee drafted the sentence together.

**ACTION:** **Dr. Pardue** asked for a motion to approve the position statement.  
**Dr. Gallaher** moved acceptance. **Ms. Cuervo** seconded. The motion passed unanimously.

**ACTION:** **Dr. Pardue** asked for a motion to adjourn.  
**Dr. Gallaher** moved acceptance. **Ms. Buck** seconded. The motion passed unanimously.